

ABSTRACT

In a dye-sensitized photoelectric transfer device having a semiconductor layer and an electrolyte layer between a transparent conductive substrate and a counter conductive substrate, the semiconductor layer is composed of titania nanotubes, and a sensitizing dye is retained by the titania nanotubes. The titania nanotubes preferably have an anatase-type crystalline form. The dye-sensitized photoelectric transfer device is used as a dye-sensitized solar cell.